

In the City Council  
City of Lodi  
Lodi, California

RESOLUTION NO. 996

RESOLUTION APPROVING SPECIFICATIONS FOR  
FIRE DEPARTMENT AUTOMOTIVE EQUIPMENT.

RESOLVED: That the specifications hereto annexed as prepared by the Chief of the Lodi Fire Department be, and the same are hereby approved and adopted as the specifications under and pursuant to which the City of Lodi will purchase automotive equipment for use of the Fire Department of this City, and to which the "Notice to Bidders" shall allude in advertising for sealed proposals for the furnishing of the same. Said specifications are entitled:

"SPECIFICATIONS FOR FURNISHING QUADRUPLE COMBINATION PUMP-  
ING ENGINE AND EQUIPMENT FOR CITY OF LODI, CALIFORNIA"  
dated May 15, 1939.

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Certified to be a full, true and correct copy of  
Resolution No. 996 of the City Council of the City  
of Lodi as adopted in regular meeting of said  
City Council held on the 15th day of May, 1939 by  
the following vote:

AYES: Councilmen, Clark, Graffigna, Spooner,  
Weihe and Mayor Steele.

NOES: Councilmen, None.

ABSENT: Councilmen, None.

ATTEST:

J. F. ELAKELY,  
City Clerk.

Dated: May 15, 1939

Sealed proposals are desired from reputable makers of Motor Fire Apparatus in accordance with these specifications and with the advertisement, a copy of which is attached.

Each bidder must furnish satisfactory evidence of his ability to construct the apparatus specified, and state the location of the factory where apparatus is to be built, and the make and type of each principal unit of the machine not manufactured in his factory. A definite statement shall be made as to the location and availability of spare and repair parts and the period over which such parts may be expected to be available, as a condition of the acceptance of the apparatus. The contractor shall guarantee the apparatus and equipment furnished against any and all defects which may be caused by defective materials and workmanship within one year from the date of the acceptance of the apparatus. This guarantee shall not cover breakage caused by neglect, misuse, wrecking caused by actual fire service, collisions or carelessness on the part of others than the maker after the apparatus is accepted.

Bid. bid shall be accompanied by complete and detailed specifications of the apparatus and equipment which it is proposed to furnish and to which the apparatus furnished under the contract must conform, as well as, with the following specifications and requirements:-

It is the intent of these specifications to cover the furnishing and delivering to the City of Lodi, California complete apparatus ready for use and fully equipped as hereinafter specified. With a view to obtaining the best results and most acceptable apparatus, these specifications cover only the general requirements as to construction and tests to which the apparatus must conform and details as to finish and equipment and appliances to be furnished. Minor details of construction and materials, where not otherwise specified, are left to the discretion of the contractor, who shall be wholly responsible for the design and construction of all features.

The apparatus shall be of the latest type, symmetrically proportioned and carefully designed to suit the nature of the service which the apparatus must perform if accepted.

All materials and workmanship and finish entering into the construction of the apparatus must be of the best of their respective kinds, and conform to the character of the apparatus and purpose for which it is intended.

Each bidder shall make accurate statements in his specifications as to the weight, overall height, wheelbase and principal dimensions. He shall specify the safe maximum speed for which the motor is designed, and the gear reduction between the motor and the driving wheels for each position of the gear shift.

The contractor shall defend any and all suits and assume all liability for any and all claims made against the City of Lodi, or any of its officials or agents for the use of any patented process, device or article forming a part of the apparatus or any appliance furnished under the contract. In the event the apparatus fails to meet the test requirements on first trials, second trials may be made at the option of the contractor within thirty (30) days of the date of the first trials. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to make such changes as the Board of Fire Underwriters of the Pacific may consider necessary to conform to any clause of the specifications within thirty (30) days after notice is given to the contractor to make such changes, shall also be cause for rejection of

Permission to keep or store the apparatus in any building owned or occupied by the City of Lodi, or its use by the Fire Department during the above specified period with the permission of the contractor shall not constitute acceptance of the same.

The apparatus shall conform fully to the following general requirements.

#### GENERAL CONSTRUCTION

The apparatus shall be constructed with due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subjected when placed in service. The chassis shall have shortest possible wheelbase, be a wide tread front axle, have heavy duty vacuum-operated hydraulic brakes on all the wheels, and shall also have guaranteed frame and springs. The overall height of the apparatus shall be as low as practicable. The radial arms, transmission, differential, axles, shafts and gears and all other parts of the machine shall be strong enough to withstand the road speed, practical tests and general service under full load. In general, the integral parts of the chassis shall be designed with adequate safety factors for the load imposed thereon. The machine shall be so designed that the various parts are readily accessible for inspection, adjustment and repair. All machine parts to be made to limit gauges and templates to insure interchangeability of repair parts.

#### INTERNAL COMBUSTION ENGINE

The engine shall have six (6) or more cylinders, and shall have sufficient horsepower, as indicated on a certified brake horsepower test curve with fan and other accessories attached to permit the apparatus to comply with the requirements and tests herein specified at the elevation above sea level of the point of delivery. The motor shall be capable of performing the pumping tests herein specified, without exceeding eighty (80) percent of the motor speed at the peak of a certified brake horsepower curve of the type of motor used when pumping at rated capacity pressure and without exceeding ninety (90) percent of peak speed at the two hundred (200) and two hundred fifty (250) pounds pressure. Contractor shall state compression ratio, grade of gasoline necessary for proper operation and maximum revolutions a minute permissible for continuous operation.

#### IGNITION

Ignition shall consist of two separate and complete ignition systems, each to operate sets of spark plugs, either with one battery common to both systems or with a battery supplying one system and a magneto supplying the other system. In the event of a common battery, a second battery shall be provided and there shall be switching arrangements to permit its use either for ignition alone or for both starting and ignition. The ignition switch shall be provided with a pilot light to indicate when the battery is connected. The generator shall be of high charging rate type, and shall be equipped with a voltage regulator. The battery shall be of heavy duty type and of adequate rating and capacity to handle the loads connected thereto. The battery used shall have sufficient capacity to operate the starter, siren, radio and lights. The individual cell voltage shall not drop below (1.65) volts with siren, lights and radio in operation.

The pump shall be not less than two (2) stage pressure volume centrifugal specially designed for fire service, with a positive and automatic pressure regulator, and a positive displacement priming arrangement, and shall have a net capacity from draft with a ten (10) foot lift of not less than seven hundred fifty (750) gallons per minute at one hundred fifty (150) pounds net pump pressure, seventy percent (70%) capacity at two hundred (200) pounds pressure and fifty percent (50%) at two hundred fifty (250) pounds pressure. Pump to have four, two and one-half (2½) inch discharge outlets threaded National Standard as per the specifications of the State Fire Marshal of the State of California. The pump shall have swivel suction connections, one on each side with a twelve (12) foot length of semi-hard suction attached to each, in addition to the regular suction openings. There shall also be furnished two ten foot sections of four and one-half (4½) inch combination drafting and hydrant hose, fitted in addition to the couplings and strainer. There shall also be furnished in addition to the above, two (2) 1½ inch x 2½ inch swivel female hydrant adapters equipped with two and one-half (2½) inch plugs. All of the above couplings and fittings shall be of approved lightweight design.

#### TRANSMISSION

The transmission shall be, at least, four speeds ahead and either one (1) or two (2) speeds reverse, with extra heavy duty rear axle.

#### COOLING SYSTEM

There shall be some kind of cooling system built into the regular circulating system of the motor, to cool the circulating water through the radiator, while the apparatus is standing and pumping, capacity.

#### TOOL AND OTHER BOXES

Locker, tool, battery and other boxes to be placed in readily accessible places; to be strong and of sufficient size and number to conveniently hold all necessary tools and the usual minor fire equipment.

#### WATER TANK

There shall be mounted in a convenient place, preferably at the front of the hose body and across the chassis, one water tank of at least, one hundred twenty-five (125) gallons capacity. To be made of heavy gauge, non-corrosive metal and provided with suitable swash partitions and a fill opening of not less than five (5) inches in diameter. Fill opening may be tight if suitable provision is made for other openings of ample size to allow the free overflow of water or otherwise prevent the building up of pressure within the tank.

Tank shall be piped to pump suction and all necessary valves and fittings shall be provided. All operating valves shall be accessible from the operating side of the apparatus. Suitable means for draining tank shall be provided. Water tank connections shall not be smaller than one and one-half (1½) inches. Suitable flexible connections shall be installed to prevent undue strains on piping and shall be located between tank valves and pump.

#### HOSE REEL

One (1) hose reel having capacity for 200 feet of ¾ inch chemical high pressure hose, suitably mounted.

Two hundred (200) feet of ¾ inch Underwriters label or better, high pressure chemical hose suitably connected to hose reel.

One (1) booster line nozzle as selected.

The hose body for the 2½ inch hose shall be mounted underneath the ladder banks. The hose body shall be easily extended to the rear for easy loading, and shall have capacity for at least 1000 feet of 2½ inch new cotton jacket rubber lined hose, and there shall be provided two boxes, one on each side of platform directly back of each rear fender with a capacity of 150 feet each of new 1½ inch cotton jacket rubber lined hose.

To the rear of the hose reel and over the ladder compartment shall be constructed an equipment compartment of heavy mesh steel extending full width and as long as possible with partitions in same, as may be directed by the Lodi Fire Department. Depth not to exceed six inches.

#### RUNNING BOARDS

Running boards and rear step to be constructed of steel laid on regulation steel outriggers, securely bolted to chassis frame, covered with pyramic rubber, with heavy aluminum moldings. Running boards shall have sixteen inch clearance and shall be as wide as permissible.

#### WINDSHIELD

Windshield to be equipped with shatter proof glass and chrome plated frame, provided with suitable dual wipers that will assure adequate operation with all speeds of the motor.

#### LIGHTING EQUIPMENT

- 1 - 10" revolving searchlight. Chrome plated.
- 2 - Suitable headlights.
- 2 - Tail lights.
- Instrument board lights.
- Pump gauge lights.
- 2 - 8" rear spot lights. Chrome plated.
- 1 - Light from Mans
- Marker lights.
- Hooded lights

### GASOLINE TANK

To be of terne plate, or cadmium coated steel with not less than two hours pumping capacity at peak speed. There shall be provided baffle plates and filler opening as required.

### HAND RAILS

Chromium plated hand rails in fire department style shall run along sides. Hand rails to be of  $1\frac{1}{2}$  inch steel tubing with copper and chromium plating. There shall be provided a rail on each side for the mounting of the helmets and coats.

### LADDERS

Apparatus to be equipped with the following aluminum ladders mounted double bank, flush style:

- 1 - 50 ft. three section heavy duty extension ladder.
- 2 - 35 ft. two section heavy duty extension ladder.
- 1 - 30 ft. two section heavy duty extension ladder.
- 1 - 20 ft. two section heavy duty extension ladder.
- 1 - 16 ft. roof ladder with folding hooks.
- 1 - 12 ft. roof ladder with folding hooks.
- 1 - 14 ft. two section baby extension ladder.
- 1 - 10 ft. folding ladder.

### FLAME EQUIPMENT

- 2 - 6 lb. pick head first quality fire axes.
- 2 - 8 lb. pick head first quality fire axes.
- 1 - steel crowbar. Cadmium plated.
- 1 - pinchbar. Cadmium plated.
- 2 - hammer head picks.
- 2 - model 15 lux extinguishers, with mounting brackets.
- 1 - 2 qt. capacity pyrene.
- 2 - Hayward lock-breakers.
- 1 - Steck wire cutter, Chrome plated.
- 1 - set climbers, safety belt and rubber gloves with protector straps and case.
- 1 - tin roof cutter.
- 2 - 8 ft. pike poles.
- 2 - 12 ft. pike poles.
- 2 - 16 ft. pike poles.
- 2 - scoop shovels.
- 2 - 4 tine pitch forks.
- 1 - Seattle Department type hose clamp.
- 1 - Ballard air-line, with 200 ft. of hose on main line, and 25 ft. attached to each of the three face pieces. (Face pieces to be with speaking diaphragm, if possible).
- 6 - Burrell all-service gas masks, complete with timing device and face pieces with speaking diaphragms.
- 2 -  $2\frac{1}{2}$  inch shut-off nozzles with play pipes as selected with three tips each, seven-eighth inch, one inch and inch and one-eighth inch tips, chrome plated.
- 36 - #2 1/2 X Globe turn-out coats.
- 36 - MSA. helmets with shields as selected.
- 2 - inch and one-half nozzles with shutoffs as selected.
- 1 -  $2\frac{1}{2}$  inch ball-type gated siamese.
- 2 -  $2\frac{1}{2}$  inch by  $1\frac{1}{2}$  inch reducers. Chrome plated.
- 1 - Blake 4-way light weight valve.
- 1 - Bressnan circulating nozzle. Chrome
- 1 - sledge hammer.

### FIRE EQUIPMENT CONTINUED

- 1 - Canvas salvage buckets.
  - 2 - squeegee rubber mops as selected.
  - 1 - pump tank, fire department type.
  - 2 - electric hand lights.
  - 1 - 100 ft. seven-eighth inch cotton life line.
  - 1 - 50 Ft. master unit complete.
  - 1 - Detroit door opener.
  - 1 - #30 waterproof first aid kit, complete.
  - 2 - 2 1/2 inch double female couplings, double swivel, chrome.
  - 2 - 2 1/2 inch double male couplings, chrome.
  - 1 - 1250 watt home light, portable lighting plant, with two 500 watt Crouse-Hinds floodlights and one 250 watt portable Crouse-Hinds spotlight, complete with three (3) 200 foot lengths first quality rubber covered water proof cable and necessary connections etc.
  - 1 - Pressman hose hoist.
  - 1 - Morrissey pompier belts with hatchets, and three cell rubber covered flashlights.
  - 6 - #102 white "Sure Dry" salvage covers size 12' x 18', grommet holes to be placed 16 inches center to center.
  - 1 - Siren, Cam free wheeling or equivalent as selected.
  - 1 - complete set apparatus tools.
  - 1 - complete set equipment spanners.
  - 1 - locomotive bell.
  - 1 - 10 ton automotive screw jack.
  - 1 - speedometer.
  - 1 - tachometer.
- Towing hooks shall be provided front and rear of apparatus.

All of the above equipment to be mounted in accordance with instructions of the Chief of the Fire Department.

It is the purpose of this set of specifications to make a complete truck for fire fighting purposes. Any items not especially noted that is necessary to the proper operation and function of a fire engine as it is generally known and understood must be furnished by the bidder.

### TIRES

Apparatus to be equipped with demountable, truck type balloon, pneumatic cord tires, of size fully adequate for the load imposed. Single front and dual rear.

### PAINTING AND FINISH

Apparatus to be handsomely finished in fine coach colors. (Fire Department red) Lettering, striping and decorating to be selected by the Chief of the fire department.

### DELIVERY AND TESTS

The apparatus shall be delivered P.G.B. Lodi within 100 days after the contract is signed. A competent man in the employ of the contractor shall remain with the apparatus for a period not exceeding three (3) days, during which instructions in operating the apparatus shall be given to such members of the fire department as the Chief of the Fire Department shall designate; all expense of operating, prior to acceptance or to being placed in fire service, shall be borne by the contractor.

The apparatus shall be tested and thoroughly inspected for compliance with these specifications within ten days after delivery and in the presence of such person or persons including the Chief of the Fire Department as the purchaser may designate. All details of these specifications and the following prescribed tests shall be checked to the satisfaction of such body and any failure be definitely noted. Report shall be made to the purchaser in writing.

#### ROAD TESTS

The apparatus fully loaded with the equipment to be carried and eight men must meet the following tests;

It must make a continuous run within one hour over any route selected by the Chief of the Fire Department or his duly authorized representative over paved and macadam roads in good condition, during which it shall operate without undue heating or showing lack of power; the distance covered and maximum speed obtained shall be as follows:

The average speed shall be at least 20 miles per hour without exceeding 30 miles per hour.

It shall, from a standing start on a level paved street, attain a road speed of 35 miles per hour within five hundred feet of the starting point and without exceeding the speed indicated at the peak of the brake horsepower curve.

#### BIDS

Bids are to include State Tax, and shall be net after all discounts for cash, etc., have been deducted.

The City reserves the right to reject or accept any or all bids.

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Approved May 15, 1939 by Resolution No. 996 of the City Council of the City of Lodi, California.